Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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| In the Matter of | ) | |
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| Fixed and Mobile Services in the Mobile Satellite | ) | |
| Service Bands at 1525–1559 MHz and 1626.5– | ) | ET Docket No. 10-142 |
| 2660.5 MHz, 1610–1626.5 MHz and 2483.5– | ) | (WT Docket 04-356) |
| 2500 MHz, and 2000–2020 and 2180–2200 MHz | ) | (WT Docket 07-195) |
| | ) | (IB Docket 11-109) |
| | ) | |

To: The Commission

## EIBASS Comments to Spectrum Task Force Request for Technical Input

Engineers for the Integrity of Broadcast Auxiliary Services Spectrum (EIBASS) hereby respectfully submits its comments to the May 20, 2011, ET Docket 10-142/WT Docket 04-356/WT Docket 07-195 Public Notice (Notice), *Spectrum Task Force Invites Technical Input on Approaches to Maximize Broadband Use of Fixed/Mobile Spectrum Allocations in the 2 GHz Range* (DA 11-929). Additionally, an informational copy is being filed to the recently released IB Docket 11-109 proceeding, involving interference between L-Band Mobile Satellite Service (MSS) Ancillary Terrestrial Component (ATC) stations and Global Positioning System (GPS) signals.[1] A subsequent June 10 Spectrum Task Force (STF) public notice, DA-1046,established a revised July 8, 2011, comment deadline, so these comments are timely filed.

## I. S-Band MSS ATC Must Protect Grandfathered TV BAS Channel A10 Operations

1. In its May 27, 2011, Petition for Reconsideration of the April 6, 2011, ET Docket 10-142 Report and Order (R&O), EIBASS pointed out the failure of the R&O to address the timely filed EIBASS comments regarding the conflict between co-channel S-Band MSS ATC operations and grandfathered TV Broadcast Auxiliary Services (BAS) Channel A10 at 2,483.5–2,500 MHz. That filing further documented an actual interference case in the Chicago market, where Special Temporary Authority (STA)[2] operation by Open Range Communications at 2,487.5–2,493 MHz had not been properly frequency coordinated with broadcasters, as repeatedly promised by the

[1] DA 11-1133, dated June 20, 2011, *Comment Deadlines Established Regarding the LightSquared Technical Working Group Report.*

[2] Call sign S2115, FCC File Number SAT-STA-20110106-0003, granted January 20, 2011.

Commission would be the case. Neither of the two stations[3] in the Chicago market with grandfather rights to A10 on their respective TV Pickup licenses had been contacted in advance by Open Range, nor had Open Range contacted the Above-1 GHz BAS frequency coordinator for the Chicago area.[4]

2. In addition to the May 27 EIBASS Petition for Reconsideration, the substantial and vital grandfathered core business need and use of TV BAS Channel A10 was pointed out in the December 1, 2009, EIBASS *ex parte* comments to IB Docket 02-364/ET Docket 00-258/WT Docket 03-66. The existence of TV BAS Channel A10 was also in the October 13, 2009, EIBASS initial comments and the October 23, 2009, EIBASS reply comments to the WT Docket 03-66 *Fifth Memorandum, Opinion and Order (MO&O) and Third FNPRM*. The existence of TV BAS Channel A10 was additionally identified in the March 30, 2004, SBE *Reply to Opposition of Petition for Reconsideration* of the February 10, 2003, IB Docket 01-185 *Report and Order (R&O)*, and in the April 4, 2003, SBE *Petition for Reconsideration of the ET Docket 01-185 R&O*.

3. In each case the R&Os, or Orders on Reconsideration, or Memorandum, Opinion and Order (MO&O) assured broadcasters that S-band MSS ATC operations would fulfill their obligation to protect co-primary and earlier-in-time grandfathered TV BAS Channel A10 operations through "frequency coordination," but apparently that obligation did not filter down to Open Range.[5] Further, the S2115 Open Range STA did not include an explicit prior coordination clause, although it did contain perfectly clear language that operation pursuant to the STA could not cause interference to any licensed service, and should such interference occur, that Open Range must *immediately* terminate operation. Unfortunately, that didn't happen in the Chicago case, either.

4. EIBASS has now obtained pursuant to its May 24, 2011, Freedom of Information Act (FOIA) request, a copy of the Chicago Enforcement Bureau case report regarding its investigation into the Open Range interference (case number EB-11-CG-0015). That report documents the harmful interference being caused to grandfathered TV BAS Channel A10 in

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[3] Station WBBM-TV, D12 (V02), holding TV Pickup license KB55028, and Station WGN-TV, D19 (V09), holding TV Pickup license KQ8499.

[4] Mr. Craig Strom of Station WLS-TV, D07 (V07), Chicago, IL. The SBE web site lists the locations and contact information of volunteer BAS frequency coordinators throughout the U.S.; see http://www.sbe.org/sections/freq_local.php .

[5] The principle that, between co-primary users, the newcomer user must protect the earlier-in-time user was spelled out at Paragraphs 53 and 58 of the February 7, 2002, ET Docket 98-142 R&O, and was re-affirmed at Paragraph 21 of the April 2, 2003, ET Docket 98-142 MO&O.

Chicago.[6] Although the Open Range STA had an explicit STA condition that in the event of harmful interference Open Range was to immediately suspend its operation, the operation continued for weeks after EIBASS Co-Chair Dane Ericksen and Chicago Above-1 GHz TV BAS coordinator Craig Strom made their joint telephone call to Open Range, advising that the spectrograph of the always-on interfering signal being received at ENG-RO sites in the Chicago area suggested that the interfering signal was coming from the Open Range STA operation.[7] And Open Range's response was not to shut down its interference-causing operation, but rather to eventually make changes to its St. John, IN, base station, to reduce the level of interference. This apparently did not occur until on or about February 10, 2011, when Open Range indicated to Mr. Strom that it would be "shutting down a number of sectors." Thus, due to Open Range's failure to frequency coordinate with the Chicago area TV stations and the Chicago area Above-1 GHz BAS coordinator, interference to co-primary and earlier-in-time grandfathered TV BAS Channel A10 operations was suffered for about three months.

5. Even then, S-band MSS ATC operators apparently don't "get it." Between co-primary users, the newcomer user is obligated to protect the incumbent user. Yet in his January 25, 2011, e-mail to the engineers tasked with operating the Chicago-area Open Range S-band MSS ATC stations, Mr. Votherms stated "I believe that we had previously been co-primary in the band with the initial ATC authorization, but that status may have changed relative to the STA." This suggests that S-band MSS ATC operators in general, and Open Range in particular, believe that their operation is allowed to cause interference to co-primary, earlier-in-time, stations. Just as the July 1, 2011, U.S. GPS Industry Council (GPSIC) Petition for Reconsideration of the April 6, 2011, ET Docket 10-142 R&O asks the Commission to issue a revised R&O making it clear that L-Band MSS ATC is not allowed to cause interference to GPS receivers, EIBASS asks the Commission to similarly educate the newcomer S-band MSS ATC operators.[8] The Commission

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[6] Excerpts from the Enforcement Bureau March 25, 2011, Case Report include the following:

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Interference is causing severe impact to the licensed users of 2.5 GHz BAS ENG
Channel 10 in Chicago (2483.5-2,500 MHz).
Signal was DFed and location in the city of St. John, In to tower (1026924).
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This seven-digit number refers to the tower's Antenna Structure Registration (ASR); the ASR shows the tower coordinates as 41-27-01.7 N, 87-27-56.1 W, NAD83, with a height of 80.5 m AGL/294.8 m AMSL. Those coordinates are 49.6 km from the center of the 80.5-km radius WGN-TV/KQ8499 operational area, and are 49.3 km from the center of the also 80.5-km radius WBBM-TV/KB55028 operational area. It should have been patently obvious that an MSS ATC base station deep inside the operational area of a *co-channel* TV Pickup station would cause interference, as both SBE and EIBASS have been warning the Commission about for years.

[7] On January 21, 2011, to Mr. Daniel Votherms of Open Range; telephone 303/376-2113.

[8] As noted in Paragraph 1, EIBASS has already filed, on May 27, 2011, its Petition for Reconsideration of the April 6, 2011, ET Docket 10-142 R&O. Thus, the Commission can use this STF venue to respond to both Petitions for Reconsideration of the R&O.

must insist that S-Band MSS ATC operators successfully accomplish the prior frequency coordination that has been promised to Part 74 TV BAS stations ever since ET Docket 01-185. And if Open Range, or any other S-band MSS ATC operator cannot do so, then they cannot operate until the Commission re-farms the 2.5 GHz TV BAS band as suggested by SBE in 2005. Doing so would eliminate the obvious co-channel conflict between a mobile service (TV Pickup stations) and an MSS operator wishing to deploy conventional terrestrial base stations with a cellular architecture.

## II. The Only Workable Solution Is For the Commission To Re-Farm the 2.5 GHz TV BAS Band As Proposed by SBE in 2005

6. EIBASS submits that is should now be obvious that mobile operations such as TV electronic news gathering (ENG) and a terrestrial cellular architecture such as MSS ATC cannot share the same frequencies in the same area at the same time; that is, these are mutually exclusive uses of 2,483.5–2,500 MHz. Indeed, if this had not been the case, there would have been no need for the Commission to have re-farmed the 2 GHz TV BAS band from 1,990–2,110 MHz to 2,025–2,110 MHz (ET Dockets 95-18 and 00-258, and WT Docket 02-55).

7. Thus, EIBASS submits that the only viable solution is to re-farm the 2.5 GHz TV BAS band as proposed by the Society of Broadcast Engineers, Inc. (SBE) in its July 11, 2005, *Response to Reply of Globalstar to the Informal Objection of the Society of Broadcast Engineers, Inc*. That re-farming proposal is summarized in the attached Figure 1.

## III. Summary

8. EIBASS will keep reminding the Commission of TV BAS Channel A10 indefinitely grandfathered, co-primary use of 2,483.5–2,500 MHz until such time as there is no longer a conflict between S-band MSS ATC, and Broadband Radio Service (BRS) Channel 1.[9] Hopefully, the eloquent solution proposed by SBE in 2005 will be adopted soon.

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[9] WT Docket 03-66 created BRS Channel 1 at 2,496–2,502 MHz, thus also creating a co-channel conflict with grandfathered TV BAS Channel A10. However, this conflict is far less severe than for S-band MSS ATC, since BRS1 has only a 4 MHz co-channel overlap with A10. Nevertheless, the BRS1 allocation is also problematic, and will be made even more so by the now proposed relaxation in out of band emission (OOBE) limits for BRS stations (originally RM-11614, now a May 27, 2011, Fourth Further Notice of Proposed Rulemaking (03-66 Fourth FNPRM). EIBASS filed comments to RM-11614, and will be filing comments to the WT 03-66 Fourth FNPRM.

## List of Figures

9. The following figures or exhibits have been prepared as a part of these EIBASS comments to the May 20, 2011, Notice:

1. Figure showing the 2005 SBE-proposed re-farming of the 2.5 GHz TV BAS band.

Respectfully submitted,

/s/ Dane E. Ericksen, P.E., CSRTE, 8-VSB, CBNT
EIBASS Co-Chair
Hammett & Edison, Inc., Consulting Engineers
San Francisco, CA

/s/ Richard A. Rudman, CPBE
EIBASS Co-Chair
Remote Possibilities
Santa Paula, CA

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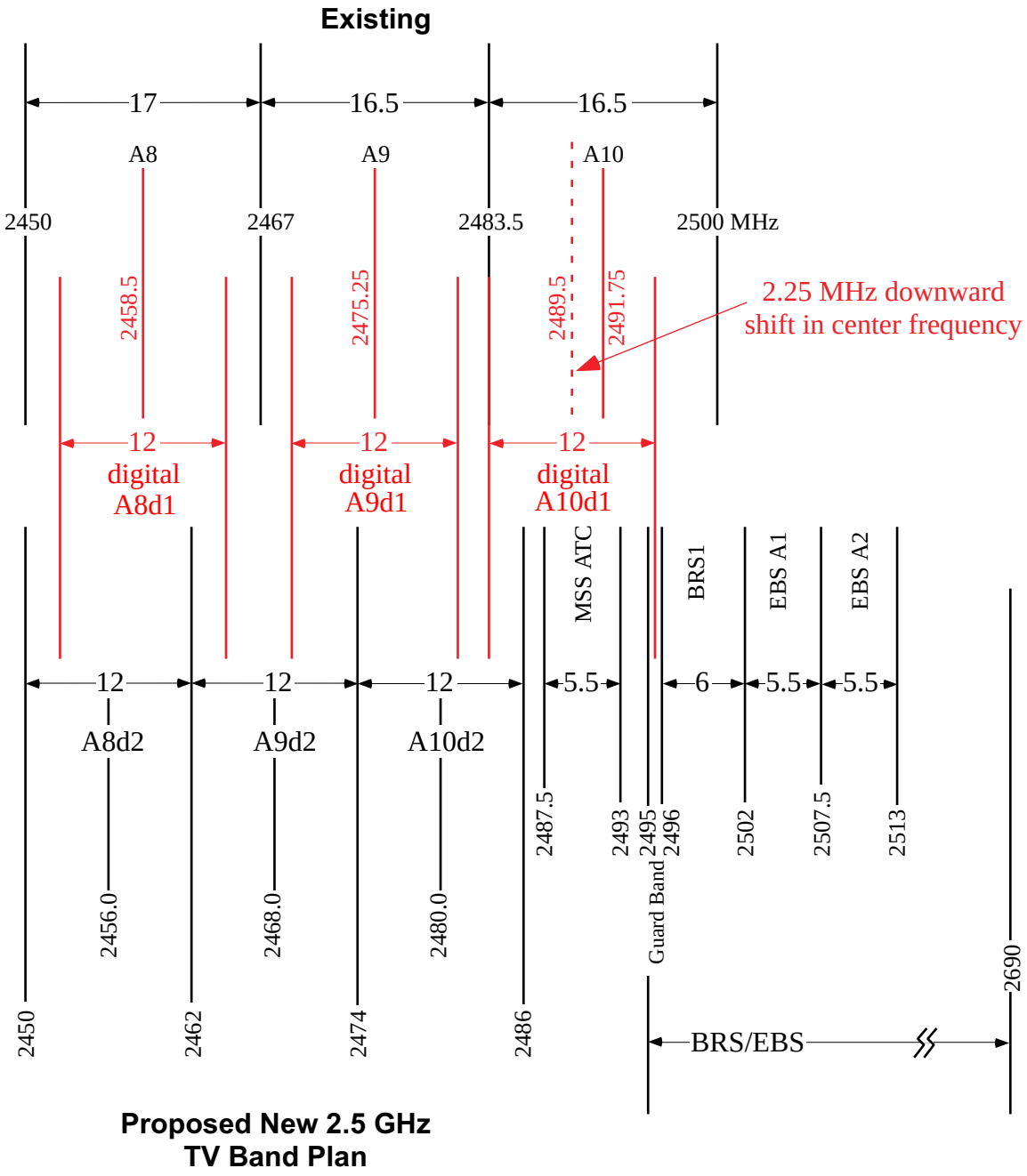
EIBASS
18755 Park Tree Lane
Sonoma, CA 94128
707/996-5200
dericksen@h-e.com

## EIBASS Spectrum Task Force Comments

## Existing vs SBE-Proposed New 2.5 GHz TV BAS Band Plan




All frequencies and bandwidths are in MHz.